THIN FILM SEMICONDUCTOR PHOTOCATALYST ELEMENT AND REACTION DEVICE USING IT

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Abstract

PROBLEM TO BE SOLVED: To provide a thin film semiconductor photocatalyst element which enables rapid decomposition of a harmful material and to provide a reaction device using this element.
SOLUTION: This thin film semiconductor photocatalyst element accelerates decomposition of charges and oxygen reduction reaction by the effect of a metal catalyst and addition of PTFE particles, so that rapid decomposition of a harmful material can be performed even when the element is used in a single form. Moreover, the photocatalyst element is deposited on a base body and plural sheets of photocatalyst elements thus prepared are arranged parallel to each other at intervals so as to perform a three-dimensional laminating method of irradiating the element surface with light beams at a small incident angle. Thereby, the decomposition rate and treating ability per unit illuminated area can be largely improved.